

### **REMARKS**

Claims 1-25 are pending in the application. Claims 1-12 have been withdrawn as directed to a non-elected invention. Claim 25 is added.

#### *Claim rejections under 35 U.S.C. 112(2)*

Claims 13, 15 and 17 were rejected under 35 U.S.C. 112, second paragraph as indefinite.

Claim 13 has been amended to clarify that it is polymerization of the unsaturated monomer that is inhibited, as described, for example, at page 1, first paragraph of the application.

Claim 15 has been amended to clarify the composition of the claimed polymerization inhibitor embodiments recited therein, as per page 1, lines 13-22 of the application.

Claim 17 has been amended to depend from claim 13 in order to address the rejection.

Accordingly, withdrawal of the rejections under 35 U.S.C. 112, second paragraph is respectfully requested.

#### *Claim rejections under 35 U.S.C. §§102 and 103*

Claims 13-16, 18, 23 and 24 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,265,752 (Whitten). Claims 13-16 and 18-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whitten in view of U.S. Patent No. 5,446,220 (Arhancet). These rejections are respectfully traversed.

Whitten is very specific in its description and claiming of the combination of the non-hindered cyclic hydroxylamine N-hydroxymorpholine (4- hydroxymorpholine) in combination with N,N-diethylhydroxylamine as a polymerization inhibitor for the combination of the ethylenically unsaturated monomers styrene and butadiene in a synthetic rubber preparation process. Arhancet is directed to polymerization inhibition for vinyl aromatic monomers, in particular styrene, with a particular three-component combination of an acyclic hydroxylamine, a dinitrophenol and a phenylenediamine. In the section of Whitten (col. 2 lines 21-50) cited by the Examiner in support of the rejection, only a combination of N-hydroxymorpholine (4- hydroxymorpholine) and N,N-diethylhydroxylamine was shown to be effective at inhibiting polymerization. The presently claimed invention is directed to polymerization inhibition of a single monomer, rather than a mixture of monomers, however. Arhancet is also concerned with purification of a single monomer

(styrene), but specifically teaches away from the use of diethylhydroxylamine in this context because its boiling point is so close to that of styrene that it will carry over with styrene during purification. Therefore, one of skill in the art would not have been led to use the polymerization inhibitor combination as taught in Whitten for the styrene/butadiene monomer combination for single monomer polymerization inhibition as taught in Arhancet. It is respectfully submitted that, given the specificity of the polymerization inhibitor combinations that are required according to the teachings of both the cited art references, that it would not have been obvious to one of ordinary skill in the art to select from among these combinations for a particular inhibitor or combination of inhibitors, not limited to those combinations and in those contexts specificity taught by the cited art, as presently claimed.

Claim 13 has been amended to clarify that the unsaturated monomer is a single monomer (as opposed to a mixture of monomers). Support for this amendment is found, for example, at page 2, line 22 to page 3, line 5 and the examples. Accordingly, in view of the foregoing remarks and amendments, withdrawal of the rejections of claim 13 under 35 U.S.C. 102 and 103, second paragraph is respectfully requested.

In addition, claim 25 has been added to recite and emphasize an aspect of the invention in this regard. According to this aspect, the composition consists essentially of one ethylenically unsaturated monomer selected from the recited group and an effective amount sufficient to inhibit polymerisation of the unsaturated monomer of a non-hindered cyclic hydroxylamine, alone or in combination with an additional inhibitor. This claim explicitly excludes any other material that materially affects the basic and novel characteristics of the claimed invention. Thus, additional unsaturated monomers, etc., are excluded from the scope of this claim. One of ordinary skill in the art would appreciate this aspect of the invention implicitly from the specification, and support for this claim can also be found, for example, in the examples.

The dependent claims are submitted to be allowable for at least the same reasons as noted above for independent claim 13. In addition, there are independent bases for patentability of these claims. For example, it is respectfully submitted that the cited art lacks any teaching or suggestion of the use of polymerization inhibitor compounds such as are recited in claim 17 in the context of the present application. Similarly, 1-hydroxypiperidine, as recited in amended claim 24, is nowhere taught or suggested as a polymerization inhibitor in the cited art.

Therefore, all pending claims are respectfully submitted to be novel and patent able over the cited art and withdrawal of the remaining rejections under 35 U.S.C. 102 and 103, second paragraph is respectfully requested.

*Withdrawn Claims*

It is understood that the withdrawn process claims are subject to rejoinder if the elected product claims are subsequently found allowable and the process claims contain or are amended to contain all of the limitations of an allowable product claim.

*Conclusion*

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application the undersigned can be reached at the telephone number set out below. If any additional fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 504480 (Order No. UDL1P090).

Respectfully submitted,  
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